

USDA Agricultural Outlook Forum 2020

(2020USDA農業產望論壇-
亞洲ASF疫情及全球市場影響)

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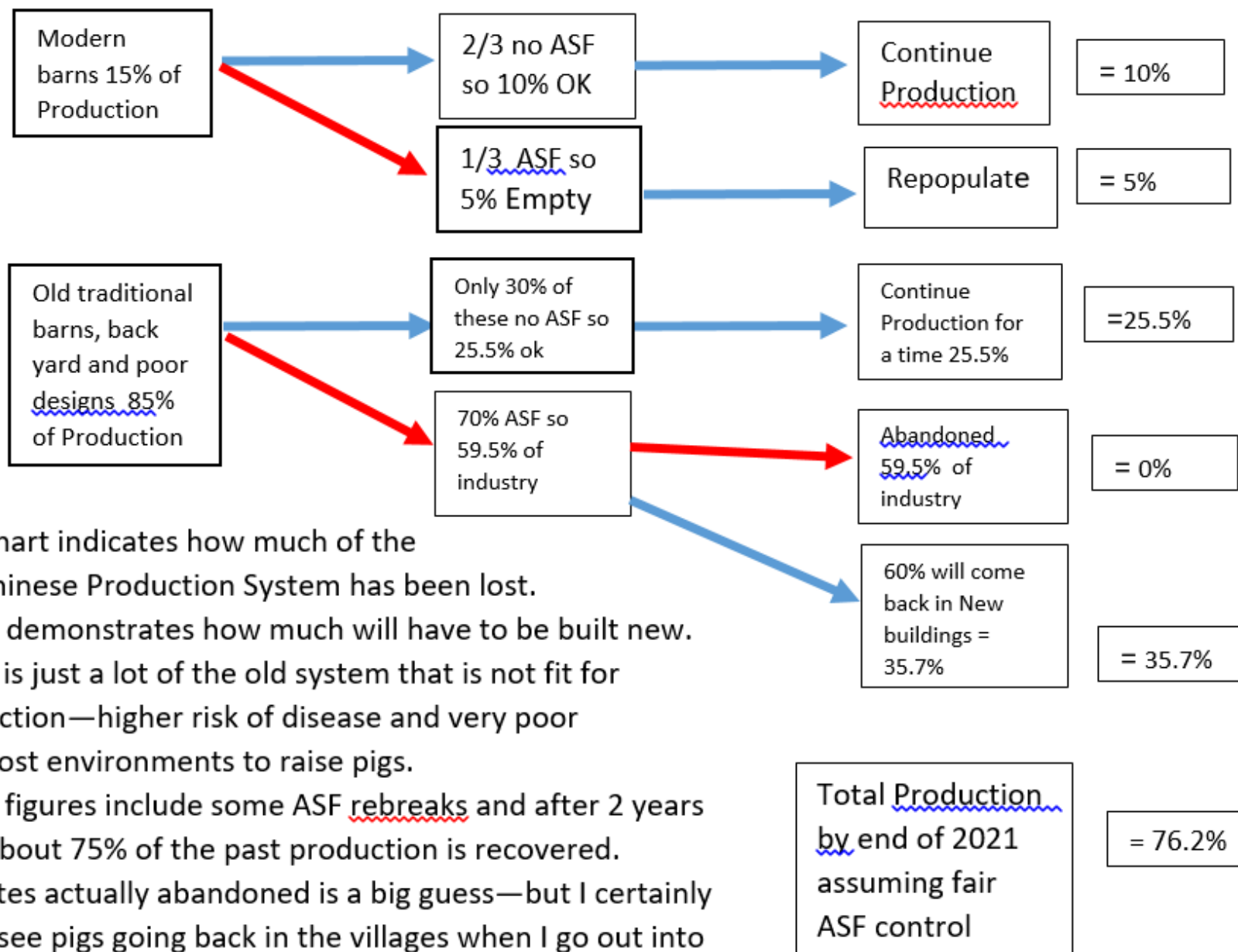
Background(講者背景)

- Whiteshire Hamroc (WH) has marketed Swine Genetics into China for over 20 years(在中國深耕毛豬基因市場超過20年)
- WH has marketed AirWorks Pig Buildings since 2008.
- WH has owned and managed genetic production systems in China
- Lost 10,000+ pigs in 2018 and 2019 to ASF at one Genetic Farm
- Office in Beijing with 4 Associates
- Average 9-10 trips per year for marketing and management purposes
- WH has worked closely with both large and small producers in China
 - Educational seminars and exchanges
 - Multiple technology transfer events

Current African Swine Fever Status (中國ASF情況)

- Well over 50% of the production has been affected by ASF. (影響50%肉豬產量)
- Some farms have repopulated and restarted production. (部分豬場開始重新生產)
 - Some have become reinfected (部分豬場有重複感染現象)
- Many farms with poor locations or poor buildings will never produce pigs again. (疫情嚴重地區或設備不佳者直接停養)
- Fear of infection/reinfection is still high! ASF is still not completely controlled. (感染及重複感染情形依舊嚴重，疫情尚未完全控制)
- Very small farms have little risk to restart and are being encouraged to do so. (當局鼓勵小型牧場復養因再次感染機率較小)
- Some smaller farms have restocked with poultry instead of pigs. (部分小型牧場改養禽肉代替豬肉)
- Many larger farms are restarting with additional biosecurity. (許多大型豬場改善生物安全措施後復養)

How much of the industry has been affected by ASF?



- 中國多少產量受到ASF疫情影響?
- 左方圖表依據先前中國生產模式進行推估，並展示未來產業結構變化情形。
- 舊產業結構有許多疾病及高成本生產風險不適合生產。
- 圖表推估**2021**年約有**75%**產量恢復(疫情發生前)。
- 演講者中國實地探訪鄉村生產量並未有恢復趨勢。

This chart indicates how much of the Old Chinese Production System has been lost. It also demonstrates how much will have to be built new. There is just a lot of the old system that is not fit for Production—higher risk of disease and very poor high cost environments to raise pigs. These figures include some ASF rebreaks and after 2 years only about 75% of the past production is recovered. The sites actually abandoned is a big guess—but I certainly don't see pigs going back in the villages when I go out into the country.

How is the consumer reacting to the shortage of pork?(短期消費量如何變化?)

- Shortage not as apparent in the big cities—imports as well as local supply apparently is channeled to where the money is.(大城市短缺現象並不嚴重，顯見供應商及通路商將供應主力集中於大城市)
 - City families have more disposable income.(因為大城市家庭每月可支配所得更多，得以支付高價豬肉)
- Very evident in rural areas and smaller Cities/Towns(鄉村及小型城市短缺現象十分嚴重)
 - Pork is just not available at restaurants/local butchers.(當地餐廳及攤商豬肉供應缺乏)
 - Small towns have no production and little money to buy expensive pork.(小城市無法生產及負擔高價豬肉)
- All areas(全區域)
 - Substitution of other proteins for pork has already occurred,(蛋白質替代效應正在發生中)
 - Decrease of animal protein in nearly all Chinese dishes—especially rural areas.(動物蛋白質消費量下滑-特別是鄉村地區)
 - Government suggestions that Pork (Protein) is a bad choice for a healthy diet. (當局推廣豬肉對飲食健康不佳)
 - 2-3X price has decreased demand everywhere.(豬價2-3倍翻漲影響消費需求)

Factors Affecting ASF Spread and Recovery (影響ASF疫情散布及控制因素)

- Cultural (國家文化)
- Political/Governmental (政府政策)
- Industry Structural and Management Problems (產業結構及管理問題)

Asian Food Culture also Contributed to ASF Spread(亞洲飲食文化促進ASF傳播)

Harbin Airport in Heilongjiang



- Chinese families are often spread all over China.(華人家庭工作因素常到外地工作)
- Every Traditional Festival results in family members traveling back home.
Spring Festival, National Day Holiday, Mid-Autumn Day, Dragon Boat Festival, New Year(傳統節慶大量人潮返鄉現象)
- Nearly every airport has processed meats for sale to travelers.(每座機場皆提供加工肉販售給旅行者)
- Part of the Chinese culture is to share local sausages, processed meats and other foods with relatives during these festivals!(中國文化習慣攜帶香腸及加工肉返鄉或拜訪送禮)

Cultural Factors (文化因素)

- Festival travel and food exchanges (節慶旅遊及食品交換(送禮))
- Proximity of people and pigs (人畜接觸)
- Village pig as the family garbage disposal (鄉下死亡豬隻當作家庭垃圾處理)
- Every man for himself! (自私自利)



At some point along the way, ASF became more of a political problem than a disease problem for China's leaders. (對中國領導者而言，ASF不僅是政治問題，更是疾病問題)

National and International transparency was absent very early in the ASF outbreak in China! (中國疫情爆發初期，國家及國際疫情資訊透明影響防疫作業發展)



Political and Governmental Factors(政府政策因素)

- Lack of preparedness for any epidemic or other natural disaster. (缺乏對流行病及天然災害應變措施)
- Lack of staff and funding to carry out prevention and control strategies relative to the size of the industry. (缺乏與產業規模相當人力及資金以進行疫情預防及控制措施)
- Political issues took precedence over practical and science based decisions relative to ASF management and control. (政治議題凌駕實務及科學決策進而影響ASF疫情管理及控制)
- Lack of transparency at all levels from producer to government agencies. (生產端至政府機關疫情通報及防控作業缺乏透明度)
- Lack of sufficient indemnities to encourage producers to report and properly depopulate infected pigs. Local governments were responsible. (地方政府缺乏良好補償措施鼓勵農民通報疫情)
- Non reporting by local governments because of the added financial burden on already strapped local governments. (地方政府面臨防疫人力及財政困難卻未向中央政府通報求援，造成疫情防控延宕)

Dead Pig Disposal(死豬任意遺棄)

- For some small farmers the nearest stream or river was the disposal method of choice. (部分小型豬場靠近沿海及河流直接放水流)
- Small farmers have little land to bury pigs properly. (小型牧場缺乏適當土地掩埋)
- There is rarely a good rendering option available. (缺乏良好化製廠或設備)
- Some dead pigs were simply moved to a road at night and dropped into the side ditch. (部分死豬利用夜間遺棄於馬路或水溝)
- **Dead disposal will be a huge problem in the US!!!** (在美國死豬處理也是大問題)



In a clean-up effort, workers retrieve dead pigs floating in a small river in Wuzhou, Guangxi. Many farmers couldn't afford the cost of disposing of dead pigs during swine fever outbreak, so they dumped them in the river. Photo: Du Caicai/Caixin

Each village had one or more of these butchers! They were often an outlet for sick pigs from local farms. (每一個村莊皆有販售來自於當地豬場病死豬之肉攤)



Look closely at the product. (靠近點觀察豬肉)

These are no longer seen in rural areas post ASF. (ASF通報地區較少類似情形)



Industry Factors (產業因素)

- Lack of understanding of epidemiology and pathogenesis of the ASF virus at all levels of production and government. (產業鏈至政府機關各層面缺乏對ASF病毒發病機制了解)
- China has areas of extreme pig density. (中國豬場飼養密度極高)
- Uncontrolled and unmanaged pig movement (100+M pigs moved across Provinces annually). (動物運作未能控制及管理(每年約有1億頭豬跨省分運輸))
- Lack of credible and capable diagnostic laboratories. (缺乏分析及診斷能力實驗室)
- Past acceptance of viral diseases, FMD, HC (SF), PED, others. (過去對病毒性疾病接受程度大，口蹄疫、典型豬瘟及仔豬下痢等)
- It would be hard to create a better environment for virus spread than what exists in China! (現今中國難以創造控制疫情傳播之環境!)
- Recovery: many things are the same—don't expect too much change! (不要期待有太多的改變!)

What does it mean to the USA now that the Americas are surrounded by the threat of ASF?(美國被ASF疫情威脅包圍，這意味著甚麼?)



Globalization complicates disease control!

(全球化使疫情控制複雜化)

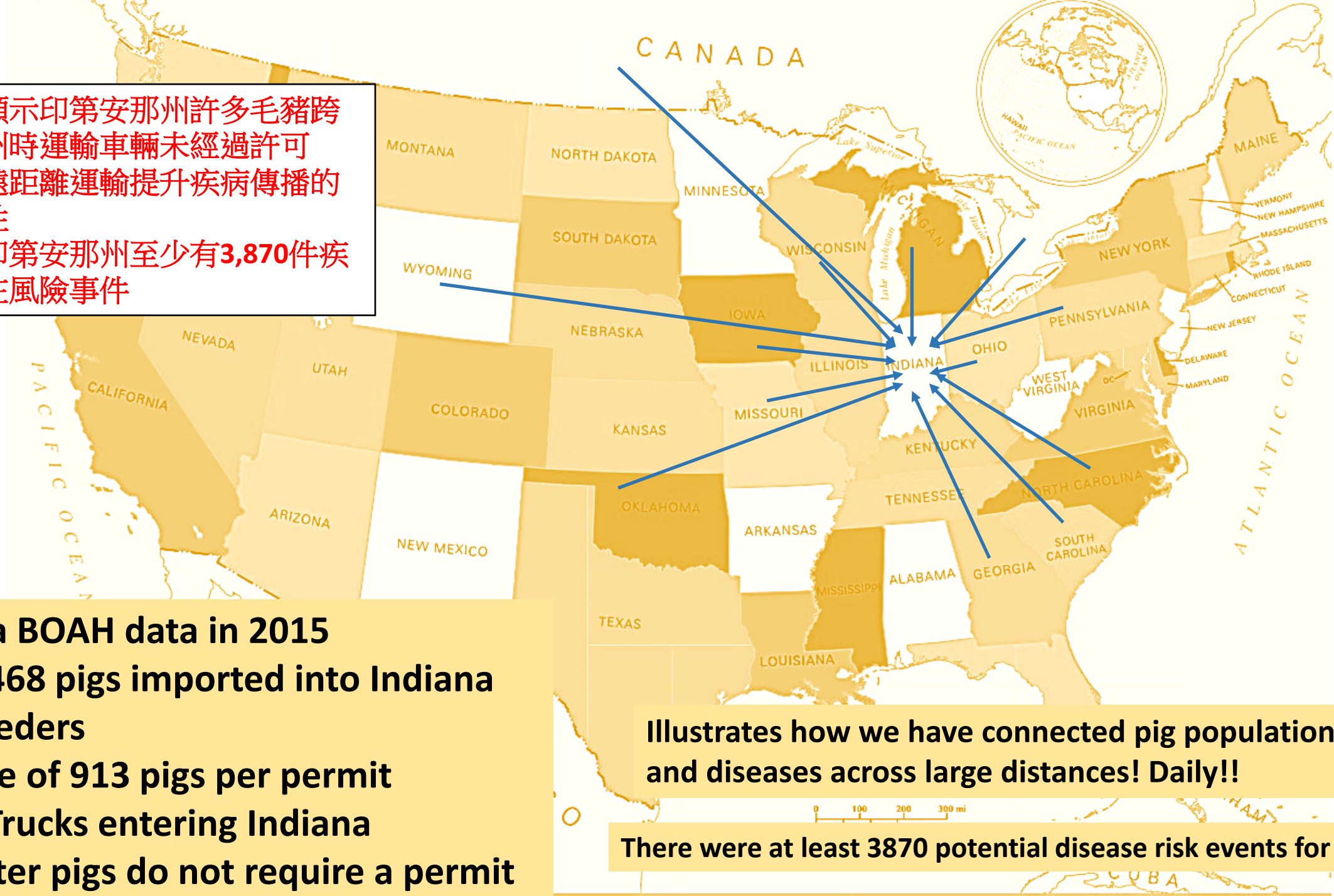
- People, human food, animal feedstuffs and biologics transfer across borders daily!(人、食品、動物飼料及生物製品每天都在跨境轉移)
- Old production methods and cultural practices in one country can put people and animals in other countries at risk in the event of a pandemic.(如果發生大流行，一個國家的老舊生產模式及文化習慣可能會威脅其他國家人及動物)
- 2003 SARS epidemic in China highlighted the concerns of political interests interfering with human health. Coronavirus has raised concerns again.(2003年SARS期間凸顯中國政治利益干擾疫情控制，新冠病毒也面對相同的疑慮)
- The ASF pandemic in China has caused transparency concerns to resurface.(中國ASF疫情引起對政策透明度的疑慮)
- 70% of new human diseases originate from animals!(70%新型人類疾病源自於動物)
- Awareness and protectionist attitude—especially when transparency is in question!(政策透明度有問題時，政治意識及貿易保護主義可能加劇疫情傳播)

本頁顯示印第安那州許多毛豬跨境入州時運輸車輛未經過許可
日常遠距離運輸提升疾病傳播的可能性
目前印第安那州至少有**3,870**件疾病潛在風險事件

Indiana BOAH data in 2015
3,531,468 pigs imported into Indiana
92% feeders
Average of 913 pigs per permit
3,870 Trucks entering Indiana
Slaughter pigs do not require a permit

Illustrates how we have connected pig populations and diseases across large distances! Daily!!

There were at least 3870 potential disease risk events for Indiana!



What is important to the US industry?(甚麼對美國養豬產業最重要?)

- Education of the industry—through NPPC, NPB, State offices or other.(產業教育-透過國家豬肉生產協會或州立辦公室)
 - Run disease simulation exercises to test industry response.(利用疾病模擬演習測試產業對疫情反應能力)
 - Recognize the risks of emphasizing individual economics against industry health.(認識個體經濟模式不利於產業發展)
- Evaluate ways to minimize current pig movement and its risks. (評估動物運輸距離最小化及風險)
 - Multi-site systems add risk and cost to pork production!(多重區域系統提升動物生產風險及成本)
 - Long incubation periods of some viral diseases frustrate early detection.(某些病毒潛伏期長，妨礙疫情早期控制)
- Improve communication and transparency.(加強溝通及透明度)
 - Between diagnostic labs and government agencies.(診斷實驗室及政府機關之間)
 - Between production systems (pig, poultry, and other livestock).(生產者系統之間)
- Continue to support State and Federal Diagnostic Laboratories.(加強支援州立及聯邦診斷實驗室發展)
- Develop and invest in an indemnity fund specifically for direct payments to producers diagnosed with an FAD such as ASF.(發展及投資補償基金補助口蹄疫及非洲豬瘟確診豬場)

How do we protect the US food system?(如何保護美國食物系統?)

- Investigate potential production systems that **Minimize Pig Movement**—"Single Site" Production Systems.(調查豬隻運輸最小化生產系統之潛力-單一區域生產系統)
- Support and fully fund the "Secure Pork Supply" initiatives by the NPPC and USDA (securepork.org). **Support and protect our Animal Diagnostic Labs!**(透過NPPC及USDA支持"安全豬肉供應基金"-支持及保護動物疾病診斷實驗室之運作)
- Monitor incoming pigs at Slaughter plants—esp in high risk areas.(監控屠宰場屠宰豬肉-特別是高風險地區)
- Make sure disease control efforts continue to be about disease control and food safety instead of politics.(確保疾病控制及食品安全工作持續進行，不被政治凌駕)
- Better identify risks to our food system.(更好辨識食物系統的風險)
- Support border controls! Stop FADs at our borders!(加強邊境管控-於邊境阻擋及並進入)
- Feral Pig Controls(野豬控制)
- Promote opportunities for cooperation and international intervention in local outbreaks of potential pandemic diseases—**especially in countries that are poorly prepared to manage disease outbreaks.**(加強與疫情爆發或高風險國家合作機制-特別是疫情無法控制的國家)
- Support our Border Partners in their monitoring and control efforts!(支持邊境國家合作監控)

ASF is unlike previous Swine diseases! (ASF與現今豬隻疾病不同)

Where does ASF go next? (ASF未來將如何傳播?)

What is the next Pandemic if not ASF? (甚麼下一個不同於ASF的動物疾病?)

Will we be prepared? (我們該如何準備?)

